California Environmental Protection Agency

Air Resources Board

PERMEATION RATES OF HIGH - DENSITY POLYETHYLENE FUEL TANKS (May 2001)

Engineering and Certification Branch Monitoring and Laboratory Division

June 11, 2001

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Introduction

The California Air Resources Board (CARB) staff tested 21 High-Density Polyethylene (HDPE) fuel tanks to determine their permeation rates. Tanks were preconditioned with commercial fuel with MTBE or ethanol oxygenates, refilled with Phase II California Reformulated Certification (CERT) fuel or commercial fuel containing ethanol, and subjected to a variable temperature profile. Permeation rates were then determined gravimetrically during the month of May.

Test Protocol

In March and April, the tanks underwent the preconditioning process. Tanks used with 4-cycle engines were preconditioned with commercial fuel or commercial fuel containing ethanol, per CARB Test Method 513. Tanks used with 2-cycle engines underwent the preconditioning process using a 2% commercial fuel/oil mixture. The tanks were stored at ambient temperature and pressure in flameproof storage cabinets. After at least four weeks of ambient preconditioning, the tanks were emptied; dried with compressed zero air, and immediately refilled with either CERT fuel, commercial fuel containing ethanol, or a 2% fuel mixture. The tanks were then sealed using a hand held fusion welder and 1/4" thick HDPE coupons and leak tested as specified in Test Method 513 (a copy can be found at the CARB web site: http://www.arb.ca.gov/regact/spillcon/spillcon.htm).

Weight loss was used to determine relative permeation rates. Sealed tanks were weighed using a 16,000 gram or 6,200 gram balances with sensitivities of ± 0.1 and ± 0.01 grams respectively. After each tank was weighed, the weight was recorded. They were then placed in the Sealed Housing for Evaporative Determination (SHED) and exposed to a 1-day/24-hour/1440-minute variable temperature profile (see Attachment 1). This profile is considered our diurnal cycle (recurring every day). Tanks were then post weighed after each 24-hour diurnal cycle and the weight loss calculated.

Results

Cumulative weight losses were determined for each container as a function of time. The tanks underwent multiple diurnal cycles, but results are calculated using only the last five 24 hour cycles. Typically, the initial days of test data were not used in determining individual per container permeation rates due to variability. A summary of all test results can be found in Attachment 2.

The average permeation rate for the 1.4 gallon Murray tractor tank (40508X92) designated T4FE was determined to be 0.00 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 1.7 fluorinated Snapper tractor tank (M301019BE) designated T5FE was determined to be 0.01 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 3.9 gallon Toro tractor tank (72045) designated T6E was determined to be 0.87 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 5 gallon fluorinated Coleman generator tank designated T11F was determined to be 0.00 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing MTBE was used for testing.

The average permeation rate for the 0.50 gallon Toro mower tank (20040) designated T19 was determined to be 2.97 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing MTBE was used for testing.

The average permeation rate for the 0.50 gallon Toro mower tank (20040) designated T19E was determined to be 3.31 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.38 gallon Lawn Boy mower tank (10363) designated T20 was determined to be 3.25 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing MTBE was used for testing.

The average permeation rate for the 0.25 gallon Briggs & Stratton tank (695106) designated T24C was determined to be 5.88 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.25 gallon Briggs & Stratton tank (695106) designated T24D was determined to be 5.71 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.25 gallon Tecumseh tank (35586) designated T29 was determined to be 3.38 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing MTBE was used for testing.

The average permeation rate for the 0.25 gallon Tecumseh tank (35586) designated T30 was determined to be 2.74 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing MTBE was used for testing.

The average permeation rate for the 0.25 gallon Tecumseh tank (35586) designated T31 was determined to be 2.94 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.25 gallon Tecumseh tank (35586) designated T32 was determined to be 3.43 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.07 gallon 2-cycle Frigidare Home Products tank (530-0038592) designated T37 was determined to be 5.11 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. A 2% mixture of oil and commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.09 gallon 2-cycle Frigidare Home Products tank (530-049318) designated T38 was determined to be 3.92 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. A 2% mixture of oil and commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.06 gallon 2-cycle Frigidare Home Products tank (530-052243) designated T39 was determined to be 5.57 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. A 2% mixture of oil and commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.25 gallon Yard Machine mower tank (11A-021C000) designated T40E was determined to be 3.80 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.25 gallon Yard Machine mower tank (12A-559K401) designated T41E was determined to be 4.28 grams/gallon/day. This

rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing ethanol was used for testing.

The average permeation rate for the 0.25 gallon Craftsman mower tank (917379440) designated T42 was determined to be 5.22 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing MTBE was used for testing.

The average permeation rate for the 0.38 gallon Craftsman mower tank (917389580) designated T43 was determined to be 2.47 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing MTBE was used for testing.

The average permeation rate for the 0.25 gallon Yard Machine mower tank (11A-414D729) designated T44 was determined to be 4.25 grams/gallon/day. This rate is based on data averaged from tests of five 24-hour diurnal cycles. Commercial fuel containing MTBE was used for testing.

Attachment 1

1 Day / 24 Hour / 1440 Minute Variable Temperature Profile

| HOUR | MINUTE | TIME REMAINING (MINUTES) | TEMPERATURE (°F) |
|------|--------|--------------------------------|---------------------|
| 0 | 0 | 1440 | 65.0 |
| 1 | 60 | 1380 | 66.6 |
| 2 | 120 | 1320 | 72.6 |
| 3 | 180 | 1260 | 80.3 |
| 4 | 240 | 1200 | 86.1 |
| 5 | 300 | 1140 | 90.6 |
| 6 | 360 | 1080 | 94.6 |
| 7 | 420 | 1020 | 98.1 |
| 8 | 480 | 960 | 101.2 |
| 9 | 540 | 900 | 103.4 |
| 10 | 600 | 840 | 104.9 |
| 11 | 660 | 780 | 105.0 |
| 12 | 720 | 720 | 104.2 |
| 13 | 780 | 660 | 101.1 |
| 14 | 840 | 600 | 95.3 |
| 15 | 900 | 540 | 88.8 |
| 16 | 960 | 480 | 84.4 |
| 17 | 1020 | 420 | 80.8 |
| 18 | 1080 | 360 | 77.8 |
| 19 | 1140 | 300 | 75.3 |
| 20 | 1200 | 240 | 72.0 |
| 21 | 1260 | 180 | 70.0 |
| 22 | 1320 | 120 | 68.2 |
| 23 | 1380 | 60 | 66.5 |
| 24 | 1440 | 0 | 65.0 |

Attachment 2

PERMEATION TEST RESULTS

May 2001

| Diurnal Cycles | Tank | | Tank | Treatment | Test | Fuel | Avg. Loss |
|-----------------------|-------|--------------|----------|-------------|-------------|-------------|-------------|
| (# 24 hr cycles) | Label | Mfg. | Volume | Level | Dates | Type | (g/gal/day) |
| 5 | T4FE | Murray | 1.4 gal | Fluorinated | 4/30 - 5/9 | Ethanol | 0.00 |
| 5 | T5FE | Snapper | 1.7 gal | Fluorinated | 4/30 - 5/9 | Ethanol | 0.01 |
| 5 | T6E | Toro | 3.9 gal | Untreated | 4/30 - 5/9 | Ethanol | 0.87 |
| 5 | T11F | Coleman | 5 gal | Fluorinated | 5/1 - 5/9 | Pump | 0.00 |
| 5 | T19 | Toro | 0.5 gal | Untreated | 4/30 - 5/9 | Pump | 2.97 |
| 5 | T19E | Toro | 0.5 gal | Untreated | 4/30 - 5/9 | Ethanol | 3.31 |
| 5 | T20 | Lawn Boy | 0.38 gal | Untreated | 4/30 - 5/9 | Pump | 3.25 |
| 5 | T24C | Briggs | 0.25 gal | Untreated | 4/30 - 5/9 | Ethanol | 5.88 |
| 5 | T24D | Briggs | 0.25 gal | Untreated | 4/30 - 5/9 | Ethanol | 5.71 |
| 5 | T29 | Tecumseh | 0.25 gal | Untreated | 4/30 - 5/9 | Pump | 3.38 |
| 5 | T30 | Tecumseh | 0.25 gal | Untreated | 4/30 - 5/9 | Pump | 2.74 |
| 5 | T31 | Tecumseh | 0.25 gal | Untreated | 4/30 - 5/9 | Ethanol | 2.94 |
| 5 | T32 | Tecumseh | 0.25 gal | Untreated | 4/30 - 5/9 | Ethanol | 3.43 |
| 5 | T37 | FHP | 0.07 gal | Untreated | 4/30 - 5/10 | Ethanol Mix | 5.11 |
| 5 | T38 | FHP | 0.09 gal | Untreated | 4/30 - 5/11 | Ethanol Mix | 3.92 |
| 5 | T39 | FHP | 0.06 gal | Untreated | 4/30 - 5/9 | Ethanol Mix | 5.57 |
| 5 | T40E | Yard Machine | 0.25 gal | Untreated | 4/30 - 5/9 | Ethanol | 3.80 |
| 5 | T41E | Yard Machine | 0.25 gal | Untreated | 4/30 - 5/9 | Ethanol | 4.28 |
| 5 | T42 | Craftsman | 0.25 gal | Untreated | 4/30 - 5/9 | Pump | 5.22 |
| 5 | T43 | Craftsman | 0.38 gal | Untreated | 4/30 - 5/9 | Pump | 2.45 |
| 5 | T44 | Yard Machine | 0.25 gal | Untreated | 4/30 - 5/9 | Pump | 4.25 |
| | | | | | | Average | 3.29 |

Attachment 2

| | Label Tank T4FE | Tare Weight (grams) 652.14 | Fuel Density (grams/gal) 2828 | |
|---|---|--|--|--|
| | Tank 141 L | 002.14 | 2020 | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 4345.04 | 4345.08 | -0.04 | -0.03 |
| 1-May | 4345.08 | 4345.03 | 0.05 | 0.04 |
| 2-May | 4345.03 | 4345.00 | 0.03 | 0.02 |
| 3-May | 4345.00 | 4345.01 | -0.01 | -0.01 |
| 4-May | 4345.01 | 4344.97 | 0.04 | 0.03 |
| 5-May | 4344.97 | 4345.01 | -0.04 | -0.03 |
| 6-May | 4345.01 | 4345.08 | -0.07 | -0.05 |
| 7-May | 4345.08 | 4345.01 | 0.07 | 0.05 |
| • | | | | |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.06 | Days | 0.00 |
| | | | | |
| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Tank T5FE | 1149.84 | 2828 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | E0 40 00 | | | |
| | 5842.80 | 5842.86 | -0.06 | -0.04 |
| 1-May | 5842.80 5842.86 | 5842.86 5842.81 | -0.06 0.05 | 0.03 |
| 2-May | | | 0.05 0.08 | 0.03 0.05 |
| 2-May 3-May | 5842.86 5842.81 5842.73 | 5842.81 5842.73 5842.69 | 0.05 0.08 0.04 | 0.03 0.05 0.02 |
| 2-May 3-May 4-May | 5842.86 5842.81 5842.73 5842.69 | 5842.81 5842.73 5842.69 5842.68 | 0.05 0.08 0.04 0.01 | 0.03 0.05 0.02 0.01 |
| 2-May 3-May | 5842.86 5842.81 5842.73 | 5842.81 5842.73 5842.69 | 0.05 0.08 0.04 | 0.03 0.05 0.02 |
| 2-May 3-May 4-May | 5842.86 5842.81 5842.73 5842.69 | 5842.81 5842.73 5842.69 5842.68 | 0.05 0.08 0.04 0.01 | 0.03 0.05 0.02 0.01 -0.02 -0.05 |
| 2-May 3-May 4-May 5-May | 5842.86 5842.81 5842.73 5842.69 5842.68 | 5842.81 5842.73 5842.69 5842.68 5842.71 | 0.05 0.08 0.04 0.01 -0.03 | 0.03 0.05 0.02 0.01 -0.02 -0.05 0.02 |
| 2-May 3-May 4-May 5-May 6-May 7-May 8-May | 5842.86 5842.81 5842.73 5842.69 5842.68 5842.71 | 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 | 0.05 0.08 0.04 0.01 -0.03 -0.09 0.03 0.05 | 0.03 0.05 0.02 0.01 -0.02 -0.05 0.02 0.03 |
| 2-May 3-May 4-May 5-May 6-May 7-May | 5842.86 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 | 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 5842.77 | 0.05 0.08 0.04 0.01 -0.03 -0.09 0.03 | 0.03 0.05 0.02 0.01 -0.02 -0.05 0.02 |
| 2-May 3-May 4-May 5-May 6-May 7-May 8-May | 5842.86 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 5842.77 | 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 5842.77 5842.72 | 0.05 0.08 0.04 0.01 -0.03 -0.09 0.03 0.05 | 0.03 0.05 0.02 0.01 -0.02 -0.05 0.02 0.03 |
| 2-May 3-May 4-May 5-May 6-May 7-May 8-May | 5842.86 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 5842.77 5842.72 Std. Dev. | 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 5842.77 5842.72 | 0.05 0.08 0.04 0.01 -0.03 -0.09 0.03 0.05 | 0.03 0.05 0.02 0.01 -0.02 -0.05 0.02 0.03 |
| 2-May 3-May 4-May 5-May 6-May 7-May 8-May | 5842.86 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 5842.77 5842.72 | 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 5842.77 5842.72 | 0.05 0.08 0.04 0.01 -0.03 -0.09 0.03 0.05 0.11 | 0.03 0.05 0.02 0.01 -0.02 -0.05 0.02 0.03 |
| 2-May 3-May 4-May 5-May 6-May 7-May 8-May | 5842.86 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 5842.77 5842.72 Std. Dev. Weight Loss | 5842.81 5842.73 5842.69 5842.68 5842.71 5842.80 5842.77 5842.72 | 0.05 0.08 0.04 0.01 -0.03 -0.09 0.03 0.05 | 0.03 0.05 0.02 0.01 -0.02 -0.05 0.02 0.03 |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--------|----------------|---------------------|---------------------------|-----------------|
| | Tank T6E | 1789.00 | 2828 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 12147.4 | 12145.1 | 2.3 | 0.63 |
| 1-May | 12145.1 | 12142.3 | 2.8 | 0.76 |
| 2-May | 12142.3 | 12139.7 | 2.6 | 0.71 |
| 3-May | 12139.7 | 12137.0 | 2.7 | 0.74 |
| 4-May | 12137.0 | 12134.0 | 3.0 | 0.82 |
| 5-May | 12134.0 | 12131.1 | 2.9 | 0.79 |
| 6-May | 12131.1 | 12128.0 | 3.1 | 0.85 |
| 7-May | 12128.0 | 12125.0 | 3.0 | 0.82 |
| 8-May | 12125.0 | 12121.6 | 3.4 | 0.93 |
| 9-May | 12121.6 | 12118.1 | 3.5 | 0.96 |
| | Std Dov | | | |
| | Std. Dev. | | | |
| | Weight Loss | | Ava Darmostian Last Civa | |
| | Last Five | 0.26 | Avg. Permeation Last Five | 0.07 |
| | Days | 0.26 | Days | 0.87 |
| | | | | |
| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Tank T11F | 2592.20 | 2807 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 15297.1 | 15296.7 | 0.4 | 0.09 |
| 1-May | 15296.7 | 15297.0 | -0.3 | -0.07 |
| 2-May | 15297.0 | 15297.0 | 0.0 | 0.00 |
| 3-May | 15297.0 | 15296.9 | 0.1 | 0.02 |
| 4-May | 15296.9 | 15297.1 | -0.2 | -0.04 |
| 5-May | 15297.1 | 15296.9 | 0.2 | 0.04 |
| 6-May | 15296.9 | 15297.0 | -0.1 | -0.02 |
| 7-May | 15297.0 | 15296.8 | 0.2 | 0.04 |
| 8-May | 15296.8 | 15296.8 | 0.0 | 0.00 |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Lastinc | | | |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--|--|---|--|---|
| | Tank T19 | 529.90 | 2807 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 2004.07 | 2003.14 | 0.93 | 1.77 |
| 1-May | 2003.14 | 2001.68 | 1.46 | 2.78 |
| 2-May | 2001.68 | 2000.22 | 1.46 | 2.78 |
| 3-May | 2000.22 | 1998.78 | 1.44 | 2.75 |
| 4-May | 1998.78 | 1997.29 | 1.49 | 2.85 |
| 5-May | 1997.29 | 1995.87 | 1.42 | 2.72 |
| 6-May | 1995.87 | 1994.41 | 1.46 | 2.80 |
| 7-May | 1994.41 | 1992.91 | 1.50 | 2.88 |
| 8-May | 1992.91 | 1991.43 | 1.48 | 2.84 |
| 9-May | 1991.43 | 1989.54 | 1.89 | 3.63 |
| | | | | |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.19 | Days | 2.97 |
| | | | | |
| | | | | |
| | | | | |
| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Label Tank T19E | Tare Weight (grams) 521.50 | Fuel Density (grams/gal) 2828 | |
| D . | Tank T19E | 521.50 | 2828 | Permeation |
| Date | Tank T19E Initial Weight | 521.50 Finial Weight | 2828 Weight Loss | (grams/gal/day) |
| 30-Apr | Tank T19E Initial Weight 1894.63 | 521.50 Finial Weight 1893.09 | 2828 Weight Loss 1.54 | (grams/gal/day) 3.17 |
| 30-Apr 1-May | Tank T19E Initial Weight 1894.63 1893.09 | 521.50 Finial Weight 1893.09 1891.49 | 2828 Weight Loss 1.54 1.60 | (grams/gal/day) 3.17 3.30 |
| 30-Apr 1-May 2-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 | 521.50 Finial Weight 1893.09 1891.49 1889.90 | 2828 Weight Loss 1.54 1.60 1.59 | (grams/gal/day) 3.17 3.30 3.28 |
| 30-Apr 1-May 2-May 3-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 | 2828 Weight Loss 1.54 1.60 1.59 1.61 | (grams/gal/day) 3.17 3.30 3.28 3.33 |
| 30-Apr 1-May 2-May 3-May 4-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 1886.63 | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 1.56 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 3.23 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 1.56 1.64 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 3.23 3.40 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 1.56 1.64 1.61 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 3.23 3.40 3.34 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 1880.26 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 1.56 1.64 1.61 1.56 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 3.23 3.40 3.34 3.24 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 1.56 1.64 1.61 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 3.23 3.40 3.34 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 1880.26 | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 1880.26 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 1.56 1.64 1.61 1.56 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 3.23 3.40 3.34 3.24 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 1880.26 Std. Dev. | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 1880.26 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 1.56 1.64 1.61 1.56 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 3.23 3.40 3.34 3.24 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 1880.26 Std. Dev. Weight Loss | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 1880.26 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 1.56 1.56 1.64 1.61 1.56 1.61 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 3.23 3.40 3.34 3.24 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T19E Initial Weight 1894.63 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 1880.26 Std. Dev. | 521.50 Finial Weight 1893.09 1891.49 1889.90 1888.29 1886.63 1885.07 1883.43 1881.82 1880.26 | 2828 Weight Loss 1.54 1.60 1.59 1.61 1.66 1.56 1.64 1.61 1.56 | (grams/gal/day) 3.17 3.30 3.28 3.33 3.43 3.23 3.40 3.34 3.24 |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--|--|--|---|---|
| | Tank T20 | 445.39 | 2807 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 1345.16 | 1344.16 | 1.00 | 3.12 |
| 1-May | 1344.16 | 1343.20 | 0.96 | 3.00 |
| 2-May | 1343.20 | 1342.19 | 1.01 | 3.16 |
| 3-May | 1342.19 | 1341.19 | 1.00 | 3.13 |
| 4-May | 1341.19 | 1340.14 | 1.05 | 3.29 |
| 5-May | 1340.14 | 1339.14 | 1.00 | 3.14 |
| 6-May | 1339.14 | 1338.15 | 0.99 | 3.11 |
| 7-May | 1338.15 | 1337.08 | 1.07 | 3.36 |
| 8-May | 1337.08 | 1336.03 | 1.05 | 3.31 |
| 9-May | 1336.03 | 1334.98 | 1.05 | 3.31 |
| | | | | |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.03 | Days | 3.25 |
| | | | | |
| | | | | |
| | | T 10/ 11// | 5 15 % (/ N | |
| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Label Tank T24C | Tare Weight (grams) 648.80 | Fuel Density (grams/gal) 2828 | December |
| Dete | Tank T24C | 648.80 | 2828 | Permeation |
| Date | Tank T24C Initial Weight | 648.80 Finial Weight | 2828 Weight Loss | (grams/gal/day) |
| 30-Apr | Tank T24C Initial Weight 1451.48 | 648.80 Finial Weight 1449.82 | 2828 Weight Loss 1.66 | (grams/gal/day) 5.85 |
| 30-Apr 1-May | Tank T24C Initial Weight 1451.48 1449.82 | 648.80 Finial Weight 1449.82 1448.16 | 2828 Weight Loss 1.66 1.66 | (grams/gal/day) 5.85 5.86 |
| 30-Apr 1-May 2-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 | 648.80 Finial Weight 1449.82 1448.16 1446.45 | 2828 Weight Loss 1.66 1.66 1.71 | (grams/gal/day) 5.85 5.86 6.05 |
| 30-Apr 1-May 2-May 3-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 | 2828 Weight Loss 1.66 1.66 1.71 1.68 | (grams/gal/day) 5.85 5.86 6.05 5.96 |
| 30-Apr 1-May 2-May 3-May 4-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 1443.08 | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 1.64 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 5.84 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 1.64 1.74 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 5.84 6.21 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 1.64 1.74 1.64 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 5.84 6.21 5.86 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 1436.44 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 1.64 1.74 1.64 1.62 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 5.84 6.21 5.86 5.80 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 1.64 1.74 1.64 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 5.84 6.21 5.86 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 1436.44 | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 1436.44 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 1.64 1.74 1.64 1.62 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 5.84 6.21 5.86 5.80 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 1436.44 Std. Dev. | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 1436.44 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 1.64 1.74 1.64 1.62 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 5.84 6.21 5.86 5.80 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 1436.44 Std. Dev. Weight Loss | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 1436.44 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 1.64 1.74 1.64 1.62 1.58 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 5.84 6.21 5.86 5.80 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T24C Initial Weight 1451.48 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 1436.44 Std. Dev. | 648.80 Finial Weight 1449.82 1448.16 1446.45 1444.77 1443.08 1441.44 1439.70 1438.06 1436.44 | 2828 Weight Loss 1.66 1.66 1.71 1.68 1.69 1.64 1.74 1.64 1.62 | (grams/gal/day) 5.85 5.86 6.05 5.96 6.00 5.84 6.21 5.86 5.80 |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--|---|--|---|---|
| | Tank T24D | 646.86 | 2828 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 1484.39 | 1482.73 | 1.66 | 5.61 |
| 1-May | 1482.73 | 1481.06 | 1.67 | 5.65 |
| 2-May | 1481.06 | 1479.28 | 1.78 | 6.03 |
| 3-May | 1479.28 | 1477.63 | 1.65 | 5.61 |
| 4-May | 1477.63 | 1475.93 | 1.70 | 5.79 |
| 5-May | 1475.93 | 1474.28 | 1.65 | 5.63 |
| 6-May | 1474.28 | 1472.56 | 1.72 | 5.88 |
| 7-May | 1472.56 | 1470.86 | 1.70 | 5.82 |
| 8-May | 1470.86 | 1469.16 | 1.70 | 5.83 |
| 9-May | 1469.16 | 1467.60 | 1.56 | 5.37 |
| | | | | |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.06 | Days | 5.71 |
| | | | | |
| | | | | |
| | 1 -1 -1 | T | F D (/) | |
| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Label Tank T29 | Tare Weight (grams) 276.75 | Fuel Density (grams/gal) 2807 | Damaatiaa |
| Data | Tank T29 | 276.75 | 2807 | Permeation |
| Date | Tank T29 Initial Weight | 276.75 Finial Weight | 2807 Weight Loss | (grams/gal/day) |
| 30-Apr | Tank T29 Initial Weight 875.75 | 276.75 Finial Weight 875.08 | 2807 Weight Loss 0.67 | (grams/gal/day) 3.14 |
| 30-Apr 1-May | Tank T29 Initial Weight 875.75 875.08 | 276.75 Finial Weight 875.08 874.41 | 2807 Weight Loss 0.67 0.67 | (grams/gal/day) 3.14 3.14 |
| 30-Apr 1-May 2-May | Tank T29 Initial Weight 875.75 875.08 874.41 | 276.75 Finial Weight 875.08 874.41 873.70 | 2807 Weight Loss 0.67 0.67 0.71 | (grams/gal/day) 3.14 3.14 3.33 |
| 30-Apr 1-May 2-May 3-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 | 276.75 Finial Weight 875.08 874.41 873.70 873.00 | 2807 Weight Loss 0.67 0.67 0.71 0.70 | (grams/gal/day) 3.14 3.14 3.33 3.29 |
| 30-Apr 1-May 2-May 3-May 4-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 872.29 | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 871.62 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 0.67 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 3.16 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 872.29 871.62 | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 871.62 870.93 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 0.67 0.67 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 3.16 3.26 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 872.29 871.62 870.93 | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 0.67 0.69 0.74 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 3.16 3.26 3.50 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 869.45 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 0.67 0.69 0.74 0.74 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 3.16 3.26 3.50 3.50 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 872.29 871.62 870.93 | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 0.67 0.69 0.74 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 3.16 3.26 3.50 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 869.45 | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 869.45 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 0.67 0.69 0.74 0.74 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 3.16 3.26 3.50 3.50 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 869.45 Std. Dev. | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 869.45 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 0.67 0.69 0.74 0.74 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 3.16 3.26 3.50 3.50 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 869.45 Std. Dev. Weight Loss | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 869.45 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 0.67 0.69 0.74 0.74 0.74 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 3.16 3.26 3.50 3.50 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T29 Initial Weight 875.75 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 869.45 Std. Dev. | 276.75 Finial Weight 875.08 874.41 873.70 873.00 872.29 871.62 870.93 870.19 869.45 | 2807 Weight Loss 0.67 0.67 0.71 0.70 0.71 0.67 0.69 0.74 0.74 | (grams/gal/day) 3.14 3.14 3.33 3.29 3.34 3.16 3.26 3.50 3.50 |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--|---|---|--|---|
| | Tank T30 | 278.01 | 2807 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 983.78 | 983.15 | 0.63 | 2.51 |
| 1-May | 983.15 | 982.49 | 0.66 | 2.63 |
| 2-May | 982.49 | 981.81 | 0.68 | 2.71 |
| 3-May | 981.81 | 981.12 | 0.69 | 2.75 |
| 4-May | 981.12 | 980.45 | 0.67 | 2.67 |
| 5-May | 980.45 | 979.83 | 0.62 | 2.48 |
| 6-May | 979.83 | 979.17 | 0.66 | 2.64 |
| 7-May | 979.17 | 978.46 | 0.71 | 2.84 |
| 8-May | 978.46 | 977.74 | 0.72 | 2.89 |
| 9-May | 977.74 | 977.03 | 0.71 | 2.85 |
| | | | | |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.04 | Days | 2.74 |
| | | | | |
| | | | | |
| | l abel | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Label Tank T31 | Tare Weight (grams) | Fuel Density (grams/gal) 2828 | |
| | Label Tank T31 | Tare Weight (grams) 277.55 | Fuel Density (grams/gal) 2828 | Permeation |
| Date | Tank T31 | 277.55 | 2828 | |
| Date 30-Apr | | | | Permeation (grams/gal/day) 2.81 |
| | Tank T31 Initial Weight | 277.55 Finial Weight | 2828 Weight Loss | (grams/gal/day) |
| 30-Apr | Tank T31 Initial Weight 1042.98 | 277.55 Finial Weight 1042.22 | 2828 Weight Loss 0.76 | (grams/gal/day) 2.81 |
| 30-Apr 1-May | Tank T31 Initial Weight 1042.98 1042.22 | 277.55 Finial Weight 1042.22 1041.49 | 2828 Weight Loss 0.76 0.73 | (grams/gal/day) 2.81 2.70 |
| 30-Apr 1-May 2-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 | 277.55 Finial Weight 1042.22 1041.49 1040.69 | 2828 Weight Loss 0.76 0.73 0.80 | (grams/gal/day) 2.81 2.70 2.96 |
| 30-Apr 1-May 2-May 3-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 1040.69 | 277.55 Finial Weight 1042.22 1041.49 1040.69 1039.93 | 2828 Weight Loss 0.76 0.73 0.80 0.76 | (grams/gal/day) 2.81 2.70 2.96 2.82 |
| 30-Apr 1-May 2-May 3-May 4-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 1040.69 1039.93 | 277.55 Finial Weight 1042.22 1041.49 1040.69 1039.93 1039.14 | 2828 Weight Loss 0.76 0.73 0.80 0.76 0.79 | (grams/gal/day) 2.81 2.70 2.96 2.82 2.93 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 1040.69 1039.93 1039.14 | 277.55 Finial Weight 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 | 2828 Weight Loss 0.76 0.73 0.80 0.76 0.79 0.71 | (grams/gal/day) 2.81 2.70 2.96 2.82 2.93 2.64 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 | 277.55 Finial Weight 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 | 2828 Weight Loss 0.76 0.73 0.80 0.76 0.79 0.71 0.76 | (grams/gal/day) 2.81 2.70 2.96 2.82 2.93 2.64 2.82 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 | 277.55 Finial Weight 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 1036.85 | 2828 Weight Loss 0.76 0.73 0.80 0.76 0.79 0.71 0.76 0.82 | (grams/gal/day) 2.81 2.70 2.96 2.82 2.93 2.64 2.82 3.05 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 1036.85 1036.03 | 277.55 Finial Weight 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 1036.85 1036.03 | 2828 Weight Loss 0.76 0.73 0.80 0.76 0.79 0.71 0.76 0.82 0.82 | (grams/gal/day) 2.81 2.70 2.96 2.82 2.93 2.64 2.82 3.05 3.05 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 1036.85 1036.03 Std. Dev. | 277.55 Finial Weight 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 1036.85 1036.03 | 2828 Weight Loss 0.76 0.73 0.80 0.76 0.79 0.71 0.76 0.82 0.82 | (grams/gal/day) 2.81 2.70 2.96 2.82 2.93 2.64 2.82 3.05 3.05 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 1036.85 1036.03 Std. Dev. Weight Loss | 277.55 Finial Weight 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 1036.85 1036.03 | 2828 Weight Loss 0.76 0.73 0.80 0.76 0.79 0.71 0.76 0.82 0.82 0.82 0.84 | (grams/gal/day) 2.81 2.70 2.96 2.82 2.93 2.64 2.82 3.05 3.05 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T31 Initial Weight 1042.98 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 1036.85 1036.03 Std. Dev. | 277.55 Finial Weight 1042.22 1041.49 1040.69 1039.93 1039.14 1038.43 1037.67 1036.85 1036.03 | 2828 Weight Loss 0.76 0.73 0.80 0.76 0.79 0.71 0.76 0.82 0.82 | (grams/gal/day) 2.81 2.70 2.96 2.82 2.93 2.64 2.82 3.05 3.05 |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--|---|---|---|---|
| | Tank T32 | 275.34 | 2828 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 924.60 | 923.85 | 0.75 | 3.27 |
| 1-May | 923.85 | 923.12 | 0.73 | 3.18 |
| 2-May | 923.12 | 922.30 | 0.82 | 3.58 |
| 3-May | 922.30 | 921.56 | 0.74 | 3.23 |
| 4-May | 921.56 | 920.79 | 0.77 | 3.37 |
| 5-May | 920.79 | 920.07 | 0.72 | 3.15 |
| 6-May | 920.07 | 919.30 | 0.77 | 3.38 |
| 7-May | 919.30 | 918.48 | 0.82 | 3.60 |
| 8-May | 918.48 | 917.67 | 0.81 | 3.56 |
| 9-May | 917.67 | 916.88 | 0.79 | 3.48 |
| | | | | |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.04 | Days | 3.43 |
| | | | | |
| | | | | |
| | l ahel | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Label Tank T37 | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Label Tank T37 | Tare Weight (grams) 144.8 | Fuel Density (grams/gal) 2838 | Permeation |
| Date | Tank T37 | 144.8 | 2838 | Permeation |
| Date 30-Apr | Tank T37 Initial Weight | 144.8 Finial Weight | 2838 Weight Loss | Permeation (grams/gal/day) 4.67 |
| 30-Apr | Tank T37 Initial Weight 339.33 | 144.8 Finial Weight 339.01 | 2838 Weight Loss 0.32 | (grams/gal/day) 4.67 |
| 30-Apr 1-May | Tank T37 Initial Weight 339.33 339.01 | 144.8 Finial Weight 339.01 338.66 | 2838 Weight Loss 0.32 0.35 | (grams/gal/day) |
| 30-Apr 1-May 2-May | Tank T37 Initial Weight 339.33 339.01 338.66 | 144.8 Finial Weight 339.01 338.66 338.30 | 2838 Weight Loss 0.32 0.35 0.36 | (grams/gal/day) 4.67 5.11 |
| 30-Apr 1-May | Tank T37 Initial Weight 339.33 339.01 | 144.8 Finial Weight 339.01 338.66 | 2838 Weight Loss 0.32 0.35 | (grams/gal/day) 4.67 5.11 5.27 |
| 30-Apr 1-May 2-May 3-May | Tank T37 Initial Weight 339.33 339.01 338.66 338.30 | 144.8 Finial Weight | 2838 Weight Loss 0.32 0.35 0.36 0.33 | (grams/gal/day) 4.67 5.11 5.27 4.84 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May | Tank T37 Initial Weight 339.33 339.01 338.66 338.30 337.97 | 144.8 Finial Weight 339.01 338.66 338.30 337.97 337.62 | 2838 Weight Loss 0.32 0.35 0.36 0.33 0.35 | (grams/gal/day) 4.67 5.11 5.27 4.84 5.14 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May | Tank T37 Initial Weight 339.33 339.01 338.66 338.30 337.97 337.62 | 144.8 Finial Weight 339.01 338.66 338.30 337.97 337.62 337.30 | 2838 Weight Loss 0.32 0.35 0.36 0.33 0.35 0.35 | (grams/gal/day) 4.67 5.11 5.27 4.84 5.14 4.71 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May | Tank T37 Initial Weight 339.33 339.01 338.66 338.30 337.97 337.62 337.30 | 144.8 Finial Weight 339.01 338.66 338.30 337.97 337.62 337.30 336.97 | 2838 Weight Loss 0.32 0.35 0.36 0.33 0.35 0.35 0.32 0.33 | (grams/gal/day) 4.67 5.11 5.27 4.84 5.14 4.71 4.87 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T37 Initial Weight 339.33 339.01 338.66 338.30 337.97 337.62 337.30 336.97 | 144.8 Finial Weight 339.01 338.66 338.30 337.97 337.62 337.30 336.97 336.60 | 2838 Weight Loss 0.32 0.35 0.36 0.33 0.35 0.35 0.32 0.33 0.37 | (grams/gal/day) 4.67 5.11 5.27 4.84 5.14 4.71 4.87 5.46 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T37 Initial Weight 339.33 339.01 338.66 338.30 337.97 337.62 337.30 336.97 336.60 336.24 | 144.8 Finial Weight 339.01 338.66 338.30 337.97 337.62 337.30 336.97 336.60 336.24 | 2838 Weight Loss 0.32 0.35 0.36 0.33 0.35 0.32 0.32 0.33 0.37 0.36 | (grams/gal/day) 4.67 5.11 5.27 4.84 5.14 4.71 4.87 5.46 5.33 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T37 Initial Weight 339.33 339.01 338.66 338.30 337.97 337.62 337.30 336.97 336.60 336.24 Std. Dev. | 144.8 Finial Weight 339.01 338.66 338.30 337.97 337.62 337.30 336.97 336.60 336.24 | 2838 Weight Loss 0.32 0.35 0.36 0.33 0.35 0.32 0.32 0.33 0.37 0.36 | (grams/gal/day) 4.67 5.11 5.27 4.84 5.14 4.71 4.87 5.46 5.33 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T37 Initial Weight 339.33 339.01 338.66 338.30 337.97 337.62 337.30 336.97 336.60 336.24 Std. Dev. Weight Loss | 144.8 Finial Weight 339.01 338.66 338.30 337.97 337.62 337.30 336.97 336.60 336.24 | 2838 Weight Loss 0.32 0.35 0.36 0.33 0.35 0.32 0.33 0.37 0.36 0.35 | (grams/gal/day) 4.67 5.11 5.27 4.84 5.14 4.71 4.87 5.46 5.33 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T37 Initial Weight 339.33 339.01 338.66 338.30 337.97 337.62 337.30 336.97 336.60 336.24 Std. Dev. | 144.8 Finial Weight 339.01 338.66 338.30 337.97 337.62 337.30 336.97 336.60 336.24 | 2838 Weight Loss 0.32 0.35 0.36 0.33 0.35 0.32 0.32 0.33 0.37 0.36 | (grams/gal/day) 4.67 5.11 5.27 4.84 5.14 4.71 4.87 5.46 5.33 |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--------|----------------|---------------------|---------------------------|-----------------|
| | Tank T38 | 153.17 | 2838 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 404.53 | 404.26 | 0.27 | 3.05 |
| 1-May | 404.26 | 403.96 | 0.30 | 3.39 |
| 2-May | 403.96 | 403.64 | 0.32 | 3.62 |
| 3-May | 403.64 | 403.12 | 0.52 | 5.89 |
| 4-May | 403.12 | 402.80 | 0.32 | 3.63 |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.10 | Days | 3.92 |
| | , | | · | |
| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Tank T39 | 150.74 | 2838 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 317.41 | 317.08 | 0.33 | 5.62 |
| 1-May | 317.08 | 316.74 | 0.34 | 5.80 |
| 2-May | 316.74 | 316.37 | 0.37 | 6.33 |
| 3-May | 316.37 | 316.06 | 0.31 | 5.31 |
| 4-May | 316.06 | 315.72 | 0.34 | 5.84 |
| 5-May | 315.72 | 315.41 | 0.31 | 5.33 |
| 6-May | 315.41 | 315.10 | 0.31 | 5.34 |
| 7-May | 315.10 | 314.75 | 0.35 | 6.04 |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.02 | Days | 5.57 |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--|--|---|--|--|
| | Tank T40E | 275.05 | 2828 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 953.28 | 952.43 | 0.85 | 3.54 |
| 1-May | 952.43 | 951.55 | 0.88 | 3.67 |
| 2-May | 951.55 | 950.68 | 0.87 | 3.64 |
| 3-May | 950.68 | 949.78 | 0.90 | 3.77 |
| 4-May | 949.78 | 948.87 | 0.91 | 3.81 |
| 5-May | 948.87 | 948.04 | 0.83 | 3.48 |
| 6-May | 948.04 | 947.17 | 0.87 | 3.66 |
| 7-May | 947.17 | 946.21 | 0.96 | 4.04 |
| 8-May | 946.21 | 945.29 | 0.92 | 3.88 |
| 9-May | 945.29 | 944.36 | 0.93 | 3.92 |
| | | | | |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.05 | Days | 3.80 |
| | | | | |
| | | | | |
| | | | | |
| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Label Tank T41E | Tare Weight (grams) 423.42 | Fuel Density (grams/gal) 2828 | D |
| Dete | Tank T41E | 423.42 | 2828 | Permeation |
| Date | Tank T41E Initial Weight | 423.42 Finial Weight | 2828 Weight Loss | (grams/gal/day) |
| 30-Apr | Tank T41E Initial Weight 1281.93 | 423.42 Finial Weight 1280.62 | 2828 Weight Loss 1.31 | (grams/gal/day) 4.32 |
| 30-Apr 1-May | Tank T41E Initial Weight 1281.93 1280.62 | 423.42 Finial Weight 1280.62 1279.32 | 2828 Weight Loss 1.31 1.30 | (grams/gal/day) 4.32 4.29 |
| 30-Apr 1-May 2-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 | 423.42 Finial Weight 1280.62 1279.32 1277.98 | 2828 Weight Loss 1.31 1.30 1.34 | (grams/gal/day) 4.32 4.29 4.43 |
| 30-Apr 1-May 2-May 3-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 | 2828 Weight Loss 1.31 1.30 1.34 1.36 | (grams/gal/day) 4.32 4.29 4.43 4.50 |
| 30-Apr 1-May 2-May 3-May 4-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 1275.36 | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 1.31 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 4.35 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 1.31 1.28 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 4.35 4.26 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 1.26 1.31 1.28 1.28 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 4.35 4.26 4.26 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 1270.22 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 1.21 1.28 1.28 1.27 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 4.35 4.26 4.26 4.23 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 1.26 1.31 1.28 1.28 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 4.35 4.26 4.26 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 1270.22 | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 1270.22 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 1.21 1.28 1.28 1.27 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 4.35 4.26 4.26 4.23 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 1270.22 Std. Dev. | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 1270.22 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 1.21 1.28 1.28 1.27 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 4.35 4.26 4.26 4.23 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 1270.22 Std. Dev. Weight Loss | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 1270.22 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 1.21 1.28 1.28 1.28 1.27 1.29 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 4.35 4.26 4.26 4.23 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T41E Initial Weight 1281.93 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 1270.22 Std. Dev. | 423.42 Finial Weight 1280.62 1279.32 1277.98 1276.62 1275.36 1274.05 1272.77 1271.49 1270.22 | 2828 Weight Loss 1.31 1.30 1.34 1.36 1.26 1.21 1.28 1.28 1.27 | (grams/gal/day) 4.32 4.29 4.43 4.50 4.18 4.35 4.26 4.26 4.23 |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--|---|---|--|---|
| | Tank T42 | 438.1 | 2807 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 1138.38 | 1137.11 | 1.27 | 5.09 |
| 1-May | 1137.11 | 1135.77 | 1.34 | 5.38 |
| 2-May | 1135.77 | 1134.45 | 1.32 | 5.31 |
| 3-May | 1134.45 | 1133.13 | 1.32 | 5.32 |
| 4-May | 1133.13 | 1131.79 | 1.34 | 5.41 |
| 5-May | 1131.79 | 1130.56 | 1.23 | 4.98 |
| 6-May | 1130.56 | 1129.24 | 1.32 | 5.35 |
| 7-May | 1129.24 | 1127.92 | 1.32 | 5.36 |
| 8-May | 1127.92 | 1126.66 | 1.26 | 5.13 |
| 9-May | 1126.66 | 1125.36 | 1.30 | 5.30 |
| | | | | |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.04 | Days | 5.22 |
| | | | | |
| | | | | |
| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
| | Label Tank T43 | Tare Weight (grams) 434.51 | Fuel Density (grams/gal) 2807 | |
| | | | | Permeation |
| Date | | | | Permeation (grams/gal/day) |
| Date 30-Apr | Tank T43 | 434.51 | 2807 | |
| | Tank T43 Initial Weight | 434.51 Finial Weight | 2807 Weight Loss | (grams/gal/day) |
| 30-Apr | Tank T43 Initial Weight 1582.27 | 434.51 Finial Weight 1581.33 | 2807 Weight Loss 0.94 | (grams/gal/day) 2.30 |
| 30-Apr 1-May | Tank T43 Initial Weight 1582.27 1581.33 | 434.51 Finial Weight 1581.33 1580.39 | 2807 Weight Loss 0.94 0.94 | (grams/gal/day) 2.30 2.30 |
| 30-Apr 1-May 2-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 | 434.51 Finial Weight 1581.33 1580.39 1579.41 | 2807 Weight Loss 0.94 0.94 0.98 | (grams/gal/day) 2.30 2.30 2.40 |
| 30-Apr 1-May 2-May 3-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 1579.41 | 434.51 Finial Weight 1581.33 1580.39 1579.41 1578.41 | 2807 Weight Loss 0.94 0.94 0.98 1.00 | (grams/gal/day) 2.30 2.30 2.40 2.45 |
| 30-Apr 1-May 2-May 3-May 4-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 1579.41 1578.41 | 434.51 Finial Weight 1581.33 1580.39 1579.41 1578.41 1577.41 | 2807 Weight Loss 0.94 0.94 0.98 1.00 1.00 | (grams/gal/day) 2.30 2.30 2.40 2.45 2.45 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 1579.41 1578.41 1577.41 | 434.51 Finial Weight 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 | 2807 Weight Loss 0.94 0.94 0.98 1.00 1.00 0.93 | (grams/gal/day) 2.30 2.30 2.40 2.45 2.45 2.28 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 | 434.51 Finial Weight 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 | 2807 Weight Loss 0.94 0.94 0.98 1.00 1.00 0.93 1.00 | (grams/gal/day) 2.30 2.30 2.40 2.45 2.45 2.28 2.46 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 1579.41 1577.41 1576.48 1575.48 | 434.51 Finial Weight 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 1574.45 | 2807 Weight Loss 0.94 0.94 0.98 1.00 1.00 0.93 1.00 1.03 | (grams/gal/day) 2.30 2.30 2.40 2.45 2.45 2.28 2.46 2.53 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 1574.45 1573.46 | 434.51 Finial Weight 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 1574.45 1573.46 | 2807 Weight Loss 0.94 0.94 0.98 1.00 1.00 0.93 1.00 1.03 0.99 | (grams/gal/day) 2.30 2.30 2.40 2.45 2.45 2.45 2.28 2.46 2.53 2.44 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 1574.45 1573.46 Std. Dev. | 434.51 Finial Weight 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 1574.45 1573.46 | 2807 Weight Loss 0.94 0.94 0.98 1.00 1.00 0.93 1.00 1.03 0.99 | (grams/gal/day) 2.30 2.30 2.40 2.45 2.45 2.45 2.28 2.46 2.53 2.44 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 1574.45 1573.46 Std. Dev. Weight Loss | 434.51 Finial Weight 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 1574.45 1573.46 | 2807 Weight Loss 0.94 0.94 0.98 1.00 1.00 0.93 1.00 1.03 0.99 1.03 | (grams/gal/day) 2.30 2.30 2.40 2.45 2.45 2.45 2.28 2.46 2.53 2.44 |
| 30-Apr 1-May 2-May 3-May 4-May 5-May 6-May 7-May 8-May | Tank T43 Initial Weight 1582.27 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 1574.45 1573.46 Std. Dev. | 434.51 Finial Weight 1581.33 1580.39 1579.41 1578.41 1577.41 1576.48 1575.48 1574.45 1573.46 | 2807 Weight Loss 0.94 0.94 0.98 1.00 1.00 0.93 1.00 1.03 0.99 | (grams/gal/day) 2.30 2.30 2.40 2.45 2.45 2.45 2.28 2.46 2.53 2.44 |

| | Label | Tare Weight (grams) | Fuel Density (grams/gal) | |
|--------|----------------|---------------------|---------------------------|-----------------|
| | Tank T44 | 430.53 | 2807 | |
| | | | | Permeation |
| Date | Initial Weight | Finial Weight | Weight Loss | (grams/gal/day) |
| 30-Apr | 1099.54 | 1098.52 | 1.02 | 4.28 |
| 1-May | 1098.52 | 1097.52 | 1.00 | 4.20 |
| 2-May | 1097.52 | 1096.46 | 1.06 | 4.46 |
| 3-May | 1096.46 | 1095.43 | 1.03 | 4.34 |
| 4-May | 1095.43 | 1094.40 | 1.03 | 4.35 |
| 5-May | 1094.40 | 1093.41 | 0.99 | 4.19 |
| 6-May | 1093.41 | 1092.41 | 1.00 | 4.23 |
| 7-May | 1092.41 | 1091.43 | 0.98 | 4.16 |
| 8-May | 1091.43 | 1090.36 | 1.07 | 4.54 |
| 9-May | 1090.36 | 1089.39 | 0.97 | 4.13 |
| | Std. Dev. | | | |
| | Weight Loss | | | |
| | Last Five | | Avg. Permeation Last Five | |
| | Days | 0.04 | Days | 4.25 |